

## Summary: Designer's concept

Creating the ideal small speaker requires attention to many details. The woofer must have the lowest-possible distortion in the bass and voice range. The tweeter must blend imperceptibly with it while delivering the smallest, most delicate high notes. The crossover circuit feeding the two should be simple — for clarity and efficiency — and must pass highs and lows at precisely the same instant. The cabinet must be rigid and absolutely quiet inside, shaped for minimal reflection off the outside. The Callisto is my closest approach to those ideals.

It was easy to choose the same unique woofer as used in our Europa. I've found no other woofer that responds as well to very soft and very loud sounds with such very low distortion at all frequencies, because of its patented neodymium magnet structure, supple suspension, and light, rigid cone. The Callisto tweeter is one of the few to move enough air in its 'bass' range (the high-voice range) such that it doesn't need reflections from the cabinet to boost its output. A special arrangement of soft wool felt around it absorbs those reflections for the clearest treble. The tweeter's delicate, treated linen dome responds to every small sound because of its rigidity and very flexible suspension. Its chassis is completely damped in its own cast-marble chamber, for the highest clarity.

Eight pieces of Q-Stone™ cast-marble combine to make an extremely rigid cabinet. The ideal cabinet shape for each tone range has been calculated using physics and mathematics. The front is shaped to prevent reflections in the low-voice range, so less 'box' is heard. In the middle range, exponential shaping of the corners and its overall asymmetric, elliptical shape prevent any tone from 'talking' to the edges. Finally, we use wool felt to stop the high-voice range and treble from reaching nearby walls and furniture.



Many design breakthroughs led to the quietest possible cabinet. On the inside, an asymmetric shape and the ports' long tubes together scatter sound waves into thick, ultra-low density fiberglass. Every sound is absorbed except the lowest bass tones needed drive the ports. One of the principal reasons a speaker sounds like a speaker is that its woofer and tweeter aren't moving together as one unit. Callisto's woofer and tweeter move in the most perfect synchrony ever devised. Our unique crossover circuit supplies their signals with no unnecessary time delays. This 'time-coherent' motion is rare because it's difficult to engineer and can only come from using our simple, Balanced Phase™ 'first-order' crossover circuit with very low-distortion, high-power drivers. Not only did Callisto reward me, I'm honored that it will reward you, too. For life.

# Callisto

"...jaw dropping good..."

"...took my breath away..."

"...these will change your life..."



*for Exceptional Size-defying Performance in  
the Monitor Loudspeaker category, April 2005*

*"Best of 2005," Paul Candy, sixmoons.com*